



## Main

|                               |                                     |
|-------------------------------|-------------------------------------|
| Commercial Status             | Commercialised                      |
| Range of product              | Harmony XB5                         |
| Product or component type     | Head for non-illuminated pushbutton |
| Device short name             | ZB5                                 |
| Bezel material                | Plastic                             |
| Mounting diameter             | 22 mm                               |
| Sale per indivisible quantity | 1                                   |
| Shape of signaling unit head  | Round                               |
| Type of operator              | Spring return                       |
| Operator profile              | White flush unmarked                |

## Complementary

|                             |  |
|-----------------------------|--|
| CAD overall width           | 29 mm                                      |
| CAD overall height          | 29 mm                                      |
| CAD overall depth           | 28 mm                                      |
| Product weight              | 0.018 kg                                   |
| Mechanical durability       | 5000000 cycles                             |
| Maximum of contact NO or NC | 9  |
| Station name                | XALK 2...5 cut-outs<br>XALD 1...5 cut-outs |

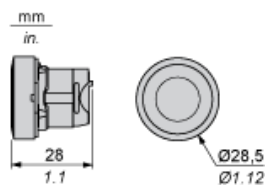
## Environment

|  |  |
|--|--|
| Protective treatment                       | TH   |
| Ambient air temperature for storage        | -40...70 °C  |
| Ambient air temperature for operation      | -25...70 °C  |
| Class of protection against electric shock | Class II conforming to IEC 60536   |
| IP degree of protection                    | IP66 conforming to IEC 60529   |
| NEMA degree of protection                  | NEMA 4X<br>NEMA 13   |
| Resistance to high pressure washer         | 7000000 Pa at 55 °C, distance: 0.1 m   |
| IK degree of protection                    | IK03 conforming to IEC 50102   |
| Standards                                  | CSA C22-2 No 14<br>EN/IEC 60947-1<br>EN/IEC 60947-5-1<br>EN/IEC 60947-5-4<br>EN/IEC 60947-5-5<br>JIS C 4520<br>UL 508                                |
| Product certifications                     | BV<br>CSA<br>DNV<br>GL<br>LROS (Lloyds register of shipping)<br>RINA<br>UL listed  |
| Vibration resistance                       | 5 gn (f = 2...500 Hz) conforming to IEC 60068-2-6  |
| Shock resistance                           | 50 gn for 11 ms half sine wave acceleration conforming to IEC 60068-2-27<br>30 gn for 18 ms half sine wave acceleration conforming to IEC 60068-2-27 |

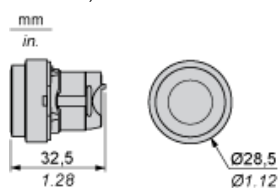
Dimensions of Heads for Spring Return Pushbuttons

Heads for Spring Return Pushbuttons

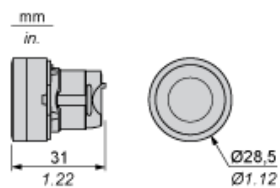
ZB5 AA•, ZB5 AA•••, ZB5 AA•8



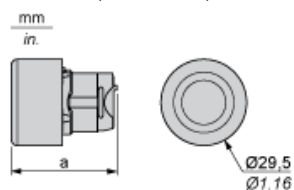
ZB5 AL•, ZB5 AL•••



ZB5 AA•4, ZB5 AA•6

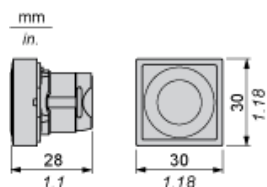


ZB5 AP••, ZB5 AP•S, ZB5 AP•83, ZB5 AP•

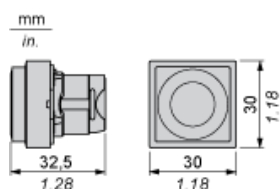


|           | a in mm | a in in. |
|-----------|---------|----------|
| ZB5 AP••  | 36.5    | 1.44     |
| ZB5 AP•S  | 33      | 1.30     |
| ZB5 AP•83 | 32      | 1.26     |
| ZB5 AP•   | 35      | 1.38     |

ZB5 CA•, ZB5 CA0

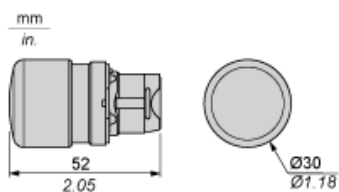


ZB5 CL•

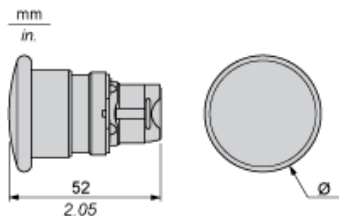


## Mushroom Heads for Spring Return Pushbuttons

### ZB5 AC•4

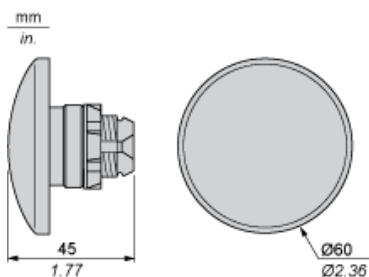


### ZB5 AC•, ZB5 AR•



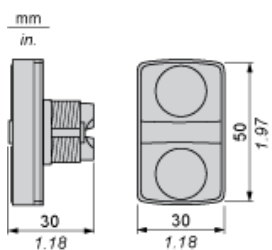
|         | Ø in mm | Ø in in. |
|---------|---------|----------|
| ZB5 AC• | 40      | 1.57     |
| ZB5 AR• | 60      | 2.36     |

### ZB5 AR•16

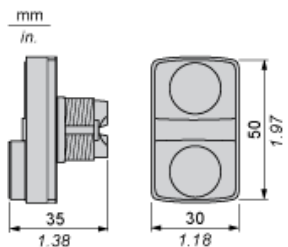


## Heads for Double-Headed, Spring Return Pushbuttons

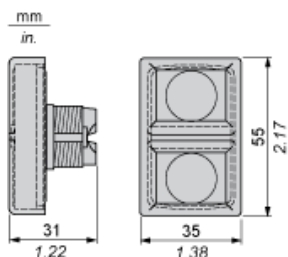
### ZB5 AA712•, ZB5 AA734•, ZB5 AA79



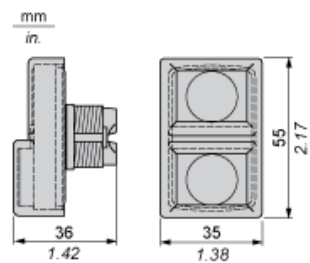
### ZB5 AL734•



### ZB5 AA712•, ZB5 AA734•, ZB5 AA79 + boot ZBA 708

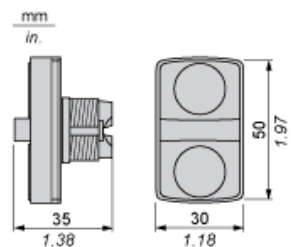


ZB5 AL734• + boot ZBA 710

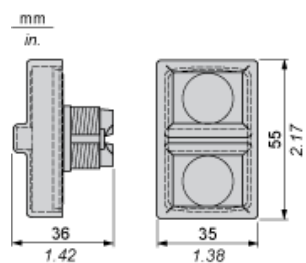


### Heads for Triple-Headed, Spring Return Pushbuttons

ZB5 AA7313•, ZB5 AA711••, ZB5 AA72124, ZB5 AA791

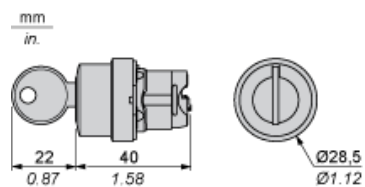


ZB5 AA7313•, ZB5 AA711••, ZB5 AA72124, ZB5 AA791 + boot ZBA 709



### Heads for Lockable, Push-Turn Pushbuttons

ZB5 AFD



Panel Cut-out for Pushbuttons, Switches and Pilot Lights (Finished Holes, Ready for Installation)

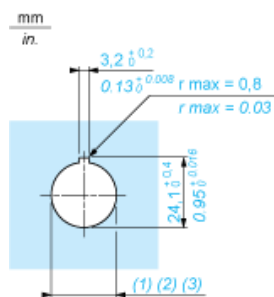
Connection by Screw Clamp Terminals or Plug-in Connectors or on Printed Circuit Board



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5 AZ902 is recommended.
- (3)  $\varnothing 22.5$  mm recommended ( $\varnothing 22.3_0^{+0.4}$ ) /  $\varnothing 0.89$  in. recommended ( $\varnothing 0.88$  in.  $_0^{+0.016}$ )

| Connections                                   | a in mm | a in in. | b in mm | b in in. |
|---|---------|----------|---------|----------|
| By screw clamp terminals or plug-in connector | 40      | 1.57     | 30      | 1.18     |
| By Faston connectors                          | 45      | 1.77     | 32      | 1.26     |
| On printed circuit board                      | 30      | 1.18     | 30      | 1.18     |

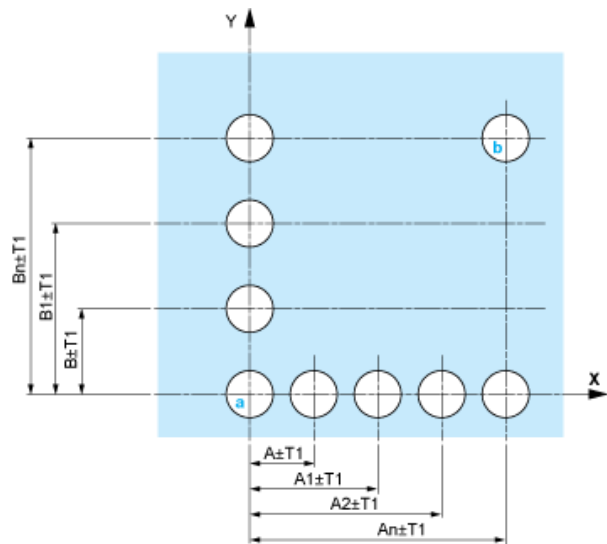
Detail of Lug Recess



- (1) Diameter on finished panel or support
- (2) For selector switches and Emergency stop buttons, use of an anti-rotation plate type ZB5 AZ902 is recommended.
- (3)  $\varnothing 22.5$  mm recommended ( $\varnothing 22.3_0^{+0.4}$ ) /  $\varnothing 0.89$  in. recommended ( $\varnothing 0.88$  in.  $_0^{+0.016}$ )

Pushbuttons, Switches and Pilot Lights for Printed Circuit Board Connection

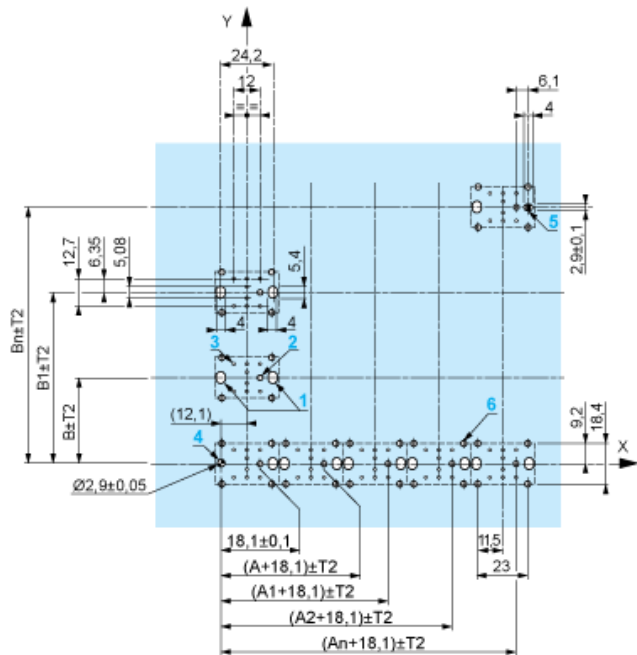
Panel Cut-outs (Viewed from Installer's Side)



- A: 30 mm min. / 1.18 in. min.
- B: 40 mm min. / 1.57 in. min.

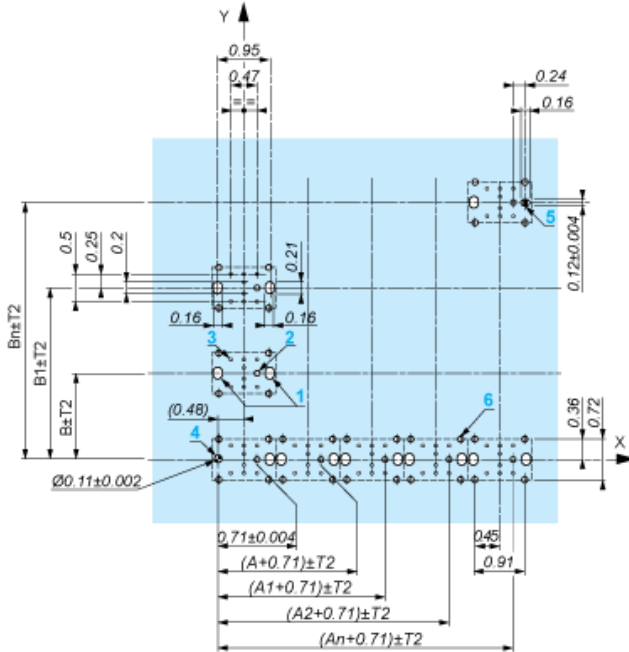
Printed Circuit Board Cut-outs (Viewed from Electrical Block Side)

Dimensions in mm



- A: 30 mm min.
- B: 40 mm min.

Dimensions in in.



- A: 1.18 in. min.
- B: 1.57 in. min.

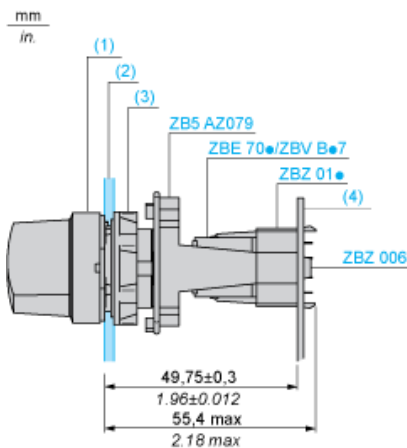
### General Tolerances of the Panel and Printed Circuit Board

The cumulative tolerance must not exceed 0.3 mm / 0.012 in.:  $T1 + T2 = 0.3 \text{ mm max.}$

### Installation Precautions

- Minimum thickness of circuit board: 1.6 mm / 0.06 in.
- Cut-out diameter: 22.4 mm  $\pm$  0.1 / 0.88 in.  $\pm$  0.004
- Orientation of body/fixing collar ZB4 BZ009:  $\pm 2^\circ 30'$  (excluding cut-outs marked a and b).
- Tightening torque of screws ZBZ 006: 0.6 N.m (5.3 lbf.in) max.
- Allow for one ZB4 BZ079 fixing collar/pillar and its fixing screws:
  - every 90 mm / 3.54 in. horizontally (X), and 120 mm / 4.72 in. vertically (Y).
  - with each selector switch head (ZB5 AD•, ZB5 AJ•, ZB5 AG•).

The fixing centers marked a and b are diagonally opposed and must align with those marked 4 and 5.



- (1) Head ZB5 AD•
- (2) Panel
- (2) Nut
- (4) Printed circuit board

### Mounting of Adapter (Socket) ZBZ 01•

- 1 2 elongated holes for ZBZ 006 screw access
- 2 1 hole  $\text{Ø} 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  for centring adapter ZBZ 01•
- 3 8  $\times \text{Ø} 1.2 \text{ mm} / 0.05 \text{ in.}$  holes
- 4 1 hole  $\text{Ø} 2.9 \text{ mm} \pm 0.05 / 0.11 \text{ in.} \pm 0.002$ , for aligning the printed circuit board (with cut-out marked a)
- 5 1 elongated hole for aligning the printed circuit board (with cut-out marked b)
- 6 4 holes  $\text{Ø} 2.4 \text{ mm} / 0.09 \text{ in.}$  for clipping in adapter ZBZ 01•

Dimensions An + 18.1 relate to the  $\varnothing 2.4 \text{ mm} \pm 0.05 / 0.09 \text{ in.} \pm 0.002$  holes for centring adapter ZBZ 01•.